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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/981,029      | 10/17/2001  | Meenakshi V. Sundar  | 25184-P041US/       | 5623             |

35034 7590 09/25/2003

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EXAMINER

ALVO, MARC S

ART UNIT PAPER NUMBER

1731

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |                  |  |
|------------------------------|-----------------|------------------|--|
| <b>Office Action Summary</b> | Application No. | Applicant(s)     |  |
|                              | 09/981.029      | MEENASKSHI ET AL |  |
|                              | Examiner        | Art Unit         |  |
|                              | Steve Alvo      | 1731             |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                       | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) ____.   |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                              | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>10-17-01</u> | 6) <input type="checkbox"/> Other: _____                                    |

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1- 5, 8, 10-19 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over DOELLE (6,355,138) with or without RHEIMS et al (6,599,390).

DOELLE teaches depositing precipitated calcium carbonate in a variety of shapes, e.g. sclenohedral, rhombohedral, aciculares, aragonite and spherical (column 4, lines 17-18) wherein the calcium carbonate is precipitated by interaction with carbon dioxide generated using a combustion process associated with processing the fiber suspension, see DOELLE, column 3, lines 9-14. It would have been obvious to the routineer that the gas used to process the suspension is a chemical used in papermaking. It is noted that claim 3 can read on the single crystals of DOELLE. See DOELLE, column 4, lines 2-14 for growing different types of crystals on and in the fiber walls. If necessary, RHEIMS et al teaches using crystals of different shapes to load fibers. It would have been obvious to use the different shaped calcium carbonate crystals of RHEIMS as the filler of DOELLE. See column 4, lines 35-36 for particle size of 0.5 to micrometers. See DOELLE, column 1, line 13 for wood fibers and abstract for consistency of 15 to 30%. The process steps of forming the product, e.g. claims 4, 5 and 12, and its intended use, e.g. claims 13-15, can not be given probative weight in a product claim. DOELLE treats the same type of material as Applicant and the material would contain the same amount of native calcium carbonate.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over DOELLE (6,355,138) with or without RHEIMS et al (6,599,390) as applied to claim 1 above, and further in view of DEPASQUALE et al (5,827,398).

If necessary, DEPASQUALE et al teaches controlling the zetsa potential during papermaking using calcium carbonate filler. It would have been obvious to a cationic charge to aid retention when making a paper from the filled fiber of DOELLE as taught by DEPASQUALE et al.

Claims 6-9 and 19, 20, 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over DOELLE (6,355,138) with or without RHEIMS et al (6,599,390) as applied to claim 1 above, and further in view of WO 97/01670.

WO 97/01670 teaches that it is known to treat mechanical pup or chemical pulp, e.g. Kraft, with calcium carbonate crystals precipitated onto the surface of the product. It would have been obvious to the artisan that the pulp of DOELLE could be mechanical pulp, e.g. 500CSF. It would have been obvious to form and use the PCC calcium carbonate of WO 97/01670 as the calcium carbonate filler of DOELLE. See WO 97/01670 for crystal sizes of 0.3 to 2.5 micrometers. Obviously the crystals of DOELLE et al would be sized similar to the crystals of WO 97/01670 as they are formed in a similar manner. See WO 97/01670, page 7, line 31 for 50% filler. If necessary, claim 19 is rejected as WO 97/01670 treats the same type of material as Applicant and would contain the same amount of native calcium carbonate. See page 13 of WO 97/01670 for using precipitated (PCC) or non-precipitated (GCC) calcium carbonate. It would have been obvious to use a dispersing agent with the filler of DOELLE as such is taught by WO 97/01670, page 7, lines 25-27.

Claims 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over DOELLE (6,355,138) with or without RHEIMS et al (6,599,390) as applied to claim 1 above, and further in view of ADMITTED PRIOR ART (specification, page 3, lines 18-26).

The use of either non-precipitated (GCC) or precipitated (PCC) calcium carbonate as a source of calcium carbonate is known by the ADMITTED PRIOR ART. It would ave been obvious to use non-precipitated calcium carbonate as the calcium carbonate of DOELLE as taught by the ADMITTED PRIOR ART.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over DOELLE (6,355,138) with or without RHEIMS et al (6,599,390) as applied to claim 1 above, and further in view of WO 99/42657.

WO 99/42657 teaches using calcium carbonate derived from a reaction of a salt of sodium bicarbonate with carbon dioxide. It would have been obvious to the routineer to derive the carbon dioxide of DOELLE using a salt of sodium bicarbonate as taught by WO 99/42657.

When filing an "Official" FAX in Group 1730, please indicate in the Header (upper right) "Official" for papers that are to be entered into the file. The "Official" FAX phone numbers for this TC 1700 are:

**Non-Final Fax: (703) 872-9310      After-Final FAX: (703) 872-9311.**

When filing an "Unofficial" FAX in Group 1730, please indicate in the Header (upper right) "Unofficial" for Draft Documents and other Communications with the PTO that are not for entry into the file of the application. This will expedite processing of your papers. The "Unofficial" FAX phone number for this Art Unit (1731) is **(703) 305-7115.**

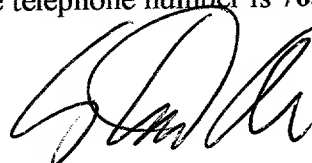
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Any inquiry concerning this communication or earlier communications from the **primary examiner** should be directed to **Steve Alvo** whose telephone number is **(703) 308-2048**. The Examiner can normally be reached on Monday - Friday from **6:00 AM - 2:30 PM (EST)**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Steve Griffin, can be reached on 703-308-1164.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Group receptionist** whose telephone number is **703-308-0661**.



**STEVE ALVO**  
**PRIMARY EXAMINER**  
**ART UNIT 1731**

MSA  
5/2/2003